

NATIONAL WEATHER SERVICE
PRODUCT/SERVICE DESCRIPTION DOCUMENT (PDD)
NOVEMBER 15, 2002

WFO HONOLULU – NEW EXPERIMENTAL COLLABORATIVE NEARSHORE SWELL AND WIND
FORECAST FOR OAHU AND IMPROVED WEB PAGE

Part I - Mission Connection

Surf is the number one weather-related killer in Hawaii. More lives are lost to surf-related accidents every year in Hawaii than any other weather event. Between 1993 to 1997, 238 ocean drownings occurred and 473 people were hospitalized for ocean-related spine injuries, with 77 directly caused by breaking waves. This is a serious safety problem. The National Weather Service (NWS) Weather Forecast Office (WFO) in Honolulu wants to better serve the citizens of Hawaii and visitors to the islands who may not be familiar with ocean conditions. An evolving Experimental Collaborative Nearshore Swell and Wind Forecast for Oahu and improved web page will incorporate educational tools and forecast explanations for all levels of ocean-going customers. The collaborative nearshore swell and wind forecast will be disseminated to the public via the world wide web and other NWS dissemination methods, including the Family of Services and NOAA Weather Wire.

The experimental collaborative nearshore forecast and improved surf web page are based on service and science; and will respond to customer needs to protect life and property, enhance the nation's economy and support the nation's growing need for environmental and public safety information. We recognize that information and products generated in the normal process of performing the NWS mission should be easily accessible to the public. Through the experimental product customers will receive additional information and forecasts that are easy to interpret and understand.

The enhancements to the web page will provide a clear, single point of entry to access standard text products and graphics to relay surf information. The web page will offer improved graphics to augment text information. Any improvements to the web page are consistent with U.S. government policy to make all data in the public domain easily accessible through the internet.

The link to the web page is: <http://www.prh.noaa.gov/hnl/pages/marine.html>

Customers of the web page will include the general public, governmental organizations, universities, and businesses. Graphics will be made available on the internet for viewing or downloading. Since the experimental product and web page is in public domain, it may be acquired through intermediaries, repackaged, and re-transmitted in accord with standard NWS product use policies.

Comments:

We are always seeking to improve our products based on customer feedback. Comments on the NWS

WFO Honolulu new Experimental Collaborative Nearshore Swell and Wind Forecast for Oahu and the web page may be addressed to:

Weather Forecast Office – Honolulu
2525 Correa Road, Suite 250
Honolulu, Hawaii 96822-2219
Attn: James Weyman, Meteorologist in Charge

e-mail: James.Weyman@noaa.gov or W-HFO.Webmaster@noaa.gov

Feedback Method: The WFO Honolulu is always seeking to improve products based on customer feedback. Feedback may be sent to the webmaster e-mail address on the web page containing the product. A technical advisory group will also periodically assess the new product.

Part II Technical Section

a. Format & Science Basis – The Experimental Collaborative Nearshore Swell and Wind Forecast for Oahu will have the following forecast information in text and digital form and will display the forecast with iconic images as well. The following are a set of forecast parameters that will be used in the aforementioned forecast:

- ◆ SWL HGT - Open Ocean Swell Height Measured from Trough to Crest in Feet
- ◆ DMNT DIR - Dominant Direction Typically +/- 10 degrees in 16 Compass Points
- ◆ DMNT PD - Dominant Period in Seconds
- ◆ HGT TREND - Height Tendency of Swell (Valid Values: UP / DOWN / SAME)
- ◆ PROB - Probability of Occurrence (Valid Values: HIGH / MED / LOW)
- ◆ WIND SPD - Open Water Wind Speed measured from a distance xx miles from xxxx in mph.
- ◆ WIND DIR - Wind Direction in 16 Compass Points
- ◆ SPD TEND - Speed Tendency (Valid Values: UP / DOWN / SAME)

Additionally, the Experimental Collaborative Nearshore Swell and Wind Forecast for Oahu will include a discussion with a summary and additional detailed information highlighting expected swell and a description of significant swell generation areas in the Pacific.

Following is a sample product format which will be issued under the current Surf Forecast for Oahu product using pre-existing communications headings:

MON
11/18

LEGEND:

SWL HGT OPEN OCEAN SWELL HEIGHT MEASURED FROM TROUGH TO CREST
IN FEET LOCATED 20 NAUTICAL MILES NORTH OF HALEIWA
DMNT DIR DOMINANT DIRECTION TYPICALLY +/-10 DEGREES IN 16 COMPASS
POINTS
DMNT PD DOMINANT PERIOD IN SECONDS
HGT TEND HEIGHT TENDENCY OF SWELL (VALID VALUES: UP/DOWN/SAME)
PROB PROBABILITY OF OCCURRENCE (VALID VALUES: HIGH/MED/LOW)
WIND SPD OPEN WATER WIND SPEED MEASURED IN MPH LOCATED
20 NAUTICAL MILES NORTH OF HALEIWA
WIND DIR WIND DIRECTION IN 16 COMPASS POINTS
SPD TEND WIND SPEED TENDENCY (VALID VALUES: UP/DOWN/SAME)

RECOGNIZING THAT SURF HEIGHTS WILL VARY BETWEEN DIFFERENT BEACHES
AND AT THE SAME BEACH AT DIFFERENT BREAK AREAS...NOAA NATIONAL
WEATHER SERVICE AND NOAA NATIONAL COASTAL DATA DEVELOPMENT CENTER
WORKING WITH THE SURF FORECAST TECHNICAL ADVISORY GROUP WILL DEVELOP
GENERAL RANGES OF SHOALING FACTORS OR OTHER FACTORS IN THE NEAR
FUTURE FOR THE ABOVE TABLE. AT THE CURRENT TIME OCEAN-GOERS CAN USE
THE SURF FORECAST AT THE TOP OF THIS MESSAGE ON WHICH PAT CALDWELL
HAS COLLABORATED. FOR THOSE WHO WANT TO DETERMINE SURF HEIGHTS BASED
ON THE ABOVE OPEN OCEAN SWELL HEIGHTS THEY CAN DERIVE SHOALING
FACTORS OR OTHER FACTORS FOR THEIR PARTICULAR NEED AND LOCATION
BASED UPON OPEN OCEAN SWELL FORECAST VALUES AND THEIR PAST EXPERIENCE
AND KNOWLEDGE. THIS FORECAST WILL BE AN EVOLVING PROCESS AND WILL BE
IMPROVED WITH EXPERIENCE AND FEEDBACK.

DISCUSSION:
SUMMARY...

DETAILED...

THIS FORECAST WAS PRODUCED THROUGH THE COLLABORATIVE EFFORTS OF
NWS AND NCDDC AND WILL BE AVAILABLE MONDAY THROUGH FRIDAY AT 2 PM
WHENEVER PAT CALDWELL IS AVAILABLE. PLEASE SEND SUGGESTIONS TO
W-HFO.WEBMASTER@NOAA.GOV OR CALL TOM HEFFNER AT 808-973-5275.

ADDITIONAL RESOURCES:

SEE /IN LOWERCASE/ [HTTP://WWW.PRH.NOAA.GOV/HNL/PAGES/MARINE.HTML](http://WWW.PRH.NOAA.GOV/HNL/PAGES/MARINE.HTML)

NWS FORECASTER/NCDDC PAT CALDWELL

b. Availability

The Experimental Collaborative Nearshore Swell and Wind Forecast for Oahu will be issued Monday through Friday at 2 P.M. Hawaii Standard Time/0000 UTC except federal holidays, whenever the collaborator from the NOAA National Coastal Data Development Center (NCDDC) is available. Additional product issuances will be possible in the future.

c. Additional Information

(1) The new forecast product is a NOAA collaborative project. The NWS Honolulu Forecast Office (WFO Honolulu) and the NCDDC Hawaii Liaison will jointly produce the product.

(2) The collaborative nearshore forecast product will evolve based on the evaluation of comments, suggestions and customer needs.

(3) A technical advisory group including local government emergency managers and water safety personnel, university researchers, and NOAA NWS and NCDDC representatives will periodically evaluate the experimental product and recommend any needed improvements.

(4) WFO Honolulu and the NCDDC representative will also perform outreach activities intended to educate affected customers and invite their comments.

(5) Future changes in this evolving product and web page will be found at the web site:

<http://www.prh.noaa.gov/hnl/pages/marine.html>